

REMARKS

The Examiner objected to claims 2-7, 15-20, 22-27 and 30 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner rejected claims 1, 8-11 and 14 under 35 U.S.C. §102(b) as allegedly being anticipated by Coolbaugh et al. (US 2002/0185708).

The Examiner rejected claim 21 under 35 U.S.C. §102(b) as allegedly being anticipated by Emons et al. (US 6,100,152).

The Examiner rejected claims 28, 29, 31, and 32 under 35 U.S.C. §102(b) as allegedly being anticipated by Emons et al. cited above.

The Examiner rejected claims 1, 12 and 13 under 35 U.S.C. §102(e) as allegedly being anticipated by Khater et al. (US 2004/0188797).

Applicants respectfully traverse the §102 rejections with the following arguments.

35 U.S.C. §102

The Examiner rejected claims 1, 8-11 and 14 under 35 U.S.C. §102(b) as allegedly being anticipated by Coolbaugh et al. (US 2002/0185708).

Applicants respectfully contend that Coolbaugh does not anticipate claim 1, because Coolbaugh does not teach each and every feature of claim 1. For example, Coolbaugh does not teach the step of "(b) if a first yield of the first plurality of identical semiconductor structures is not within a pre-specified range of a target yield, forming a second plurality of identical semiconductor structures...." Here, the step of "forming a second plurality of identical semiconductor structures" is a conditional step which is performed if the if condition in step (b) of claim 1 is satisfied. In contrast, Coolbaugh does not teach any conditional step based on a condition of a yield.

In bullet number 2 of the Office Action, the Examiner alleges that "independent claims 1 and 14 recite an "if" condition, which include an option where the first yield of the first plurality of identical semiconductor structures is within a pre-specified range, leading to a second run to form a second plurality of identical semiconductor structures being not carried out. In this instant, the reference reads on every limitation of the claims." Applicants respectfully maintain that claim 1 does not explicitly or impliedly include such a conditional step as alleged by Examiner. More specifically, claim 1 does not explicitly or impliedly include the alleged step of not forming the second plurality of identical semiconductor structures if the first yield is within the pre-specified range.

Based on the preceding arguments, Applicants respectfully maintain that Coolbaugh does

not anticipate claim 1, and that claim 1 is in condition for allowance. Since claims 8-11 depend from claim 1, Applicants contend that claims 8-11 are likewise in condition for allowance.

Applicants respectfully contend that Coolbaugh does not anticipate claim 14, because Coolbaugh does not teach each and every feature of claim 14. For example, Coolbaugh does not teach the step of "(b) if a first yield of the first plurality of identical semiconductor structures is not within a pre-specified range of a target yield, forming a second plurality of identical semiconductor structures..." Here, the step of "forming a second plurality of identical semiconductor structures" is a conditional step which is performed if the if condition in step (b) of claim 14 is satisfied. In contrast, Coolbaugh does not teach any conditional step based on a condition of a yield.

Similar to the arguments for claim 1 above, Applicants also respectfully maintain that claim 14 does not explicitly or implicitly include such a conditional step as alleged by Examiner in bullet number 2 of the Office Action. More specifically, claim 14 does not explicitly or implicitly include the alleged step of not forming the second plurality of identical semiconductor structures if the first yield is within the pre-specified range.

Based on the preceding arguments, Applicants respectfully maintain that Coolbaugh does not anticipate claim 14, and that claim 14 is in condition for allowance.

The Examiner rejected claim 21 under 35 U.S.C. §102(b) as allegedly being anticipated by Emons et al. (US 6,100,152).

Applicants respectfully contend that Emons does not anticipate claim 21, because Emons does not teach each and every feature of claim 21. For example, Emons does not teach the step of "(b) if a first yield of the first plurality of identical semiconductor structures is not within a

pre-specified range of a target yield, forming a second plurality of identical semiconductor structures..." Here, the step of "forming a second plurality of identical semiconductor structures" is a conditional step which is performed if the if condition in step (b) of claim 21 is satisfied. In contrast, Emons does not teach any conditional step based on a condition of a yield.

In bullet number 3 of the Office Action, the Examiner alleges that "the claim [21] recites an "if" condition, which includes an option where the first yield of the first plurality of identical semiconductor structures is within a pre-specified range, and a second run to form a second plurality of identical semiconductor structures is not carried out. In this instant, the reference reads on every limitation of the claims." Applicants respectfully maintain that claim 21 does not explicitly or impliedly include such a conditional step as alleged by Examiner. More specifically, claim 21 does not explicitly or impliedly include the alleged step of not forming the second plurality of identical semiconductor structures if the first yield is within the pre-specified range.

Based on the preceding arguments, Applicants respectfully maintain that Emons does not anticipate claim 21, and that claim 21 is in condition for allowance.

The Examiner rejected claims 28, 29, 31, and 32 under 35 U.S.C. §102(b) as allegedly being anticipated by Emons et al. cited above.

Applicants respectfully contend that Emons does not anticipate claim 28, because Emons does not teach each and every feature of claim 28. For example, Emons does not teach the step of "(a) providing a relationship between a yield of the semiconductor structure design, a deposition temperature, and a precursor flow rate". The "yield" as claimed in step (a) of claim 28 is a percentage of satisfactory structures in all structures fabricated according to the

"semiconductor structure design" of claim 28. In contrast, Emons does not teach any relationship involving a yield of any semiconductor structure design.

In addition, Emons does not teach the step of "(b) selecting a target yield for the semiconductor structure design" as claimed in claim 28. Examiner argues that "the disclosure at the paragraph bridging column 4 and 5 provides a relationship between a yield of the semiconductor structure design, a deposition temperature, and a precursor flow rate." However, what is disclosed at the paragraph bridging column 4 and 5 of Emons is a selection of a target percentage for Germanium (20%) in the final SiGe layer 1, and the selection of "composition of the gas and the growth conditions" so as to achieve this Ge percentage (i.e., 20%). In contrast, the "target yield" as claimed in claim 28 is a target percentage of satisfactory structures in all structures fabricated according to the "semiconductor structure design".

Moreover, Emons does not teach the feature "the desired deposition temperature and the desired precursor flow rate are determined based on the relationship". The "relationship" in claim 28 involves "the yield". In contrast, Emons does not teach any relationship involving a yield in the sense of "the yield" of claim 28.

Based on the preceding arguments, Applicants respectfully maintain that Emons does not anticipate claim 28, and that claim 28 is in condition for allowance.

Since claims 29, 31, and 32 depend from claim 28, Applicants contend that claims 29, 31, and 32 are likewise in condition for allowance.

The Examiner rejected claims 1, 12 and 13 under 35 U.S.C. §102(c) as allegedly being anticipated by Khater et al. (US 2004/0188797).

Applicants respectfully contend that Khater does not anticipate claim 1, because Khater

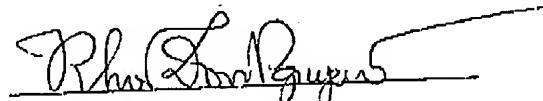
does not teach each and every feature of claim 1. For example, Khater does not teach the step of "(b) if a first yield of the first plurality of identical semiconductor structures is not within a specified range of a target yield, forming a second plurality of identical semiconductor structures..." The step of "forming a second plurality of identical semiconductor structures..." is a conditional step which is performed if the if condition in step (b) of claim 1 is satisfied. In contrast, Khater does not teach any conditional step based on a condition of a yield.

Based on the preceding arguments, Applicants respectfully maintain that Khater does not anticipate claim 1, and that claim 1 is in condition for allowance. Since claims 12 and 13 depend from claim 1, Applicants contend that claims 12 and 13 are likewise in condition for allowance.

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account No. 09-0456.

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Khoi D. Nguyen

Registration No. 47,820

Schmeiser, Olsen & Watts
3 Lear Jet Lane, Suite 201
Latham, New York 12110
(518) 220-1850

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19